



# TV-B-Gone Kit

Written By: Nick Brenn



## TOOLS:

- [Solder \(1\)](#)
- [Soldering iron \(1\)](#)
- [Wire cutters \(1\)](#)



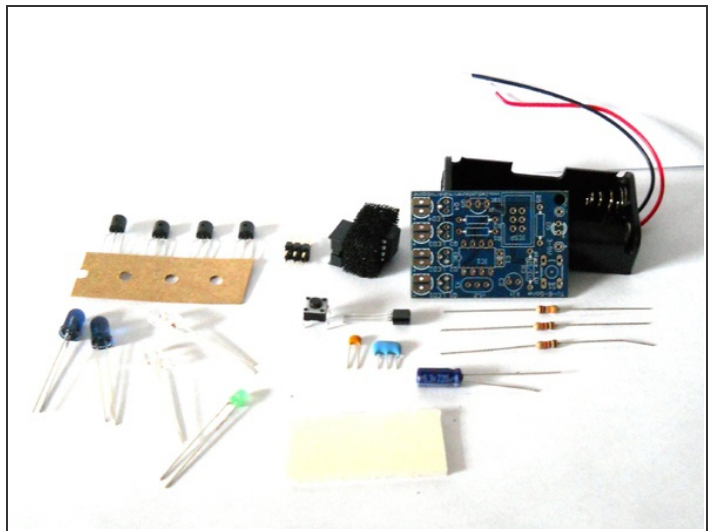
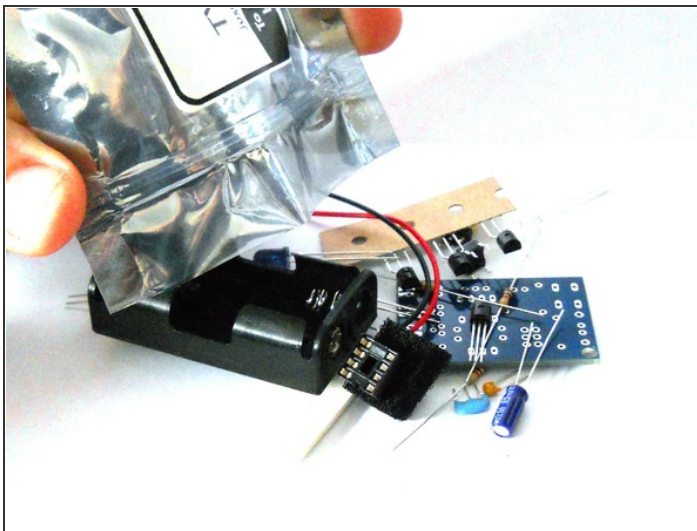
## PARTS:

- [Super TV-B-Gone Kit \(1\)](#)  
*includes all of the following parts:*
- [Battery holder \(1\)](#)
- [Transistor PN 2222 \(4\)](#)
- [Transistor PN 2907 \(1\)](#)
- [IC Microcontroller Chip \(1\)](#)
- [8-Pin IC Socket \(1\)](#)
- [Ceramic capacitor \(1\)](#)
- [220uF Electrolytic Capacitor \(1\)](#)
- [Brown-Black-Red Resistor \(2\)](#)
- [IR LED \(2\)](#)
- [IR LED \(2\)](#)
- [Green LED \(1\)](#)
- [Tactile switch \(1\)](#)
- [Blue Ceramic Oscillator \(1\)](#)
- [Optional 10K Resistor \(Outside of USA/Asia\) \(1\)](#)
- [Printed Circuit Board \(1\)](#)
- [Sticky Foam \(1\)](#)

## SUMMARY

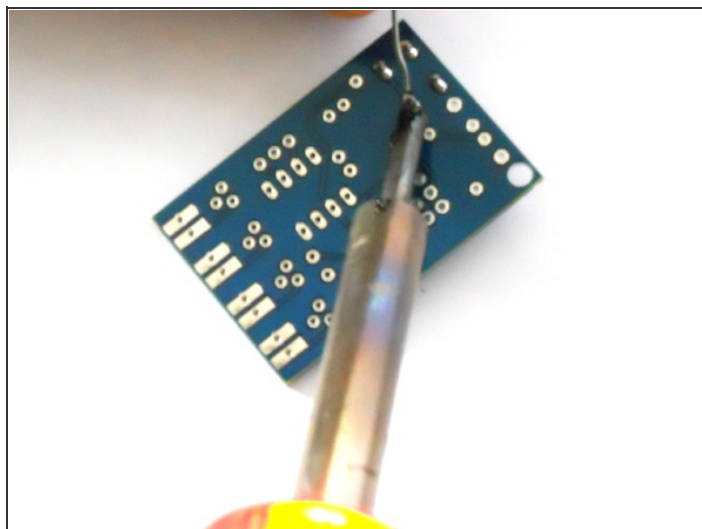
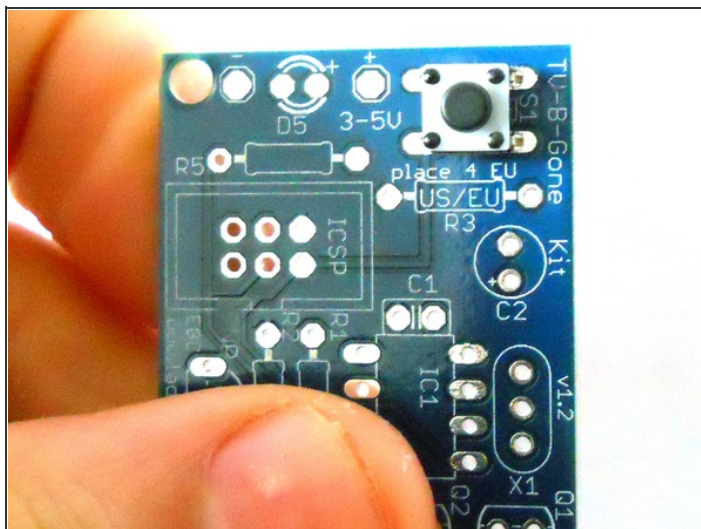
Tired of all those LCD TVs everywhere? Want a break from advertisements while you're trying to eat? Want to zap screens from across the street? The TV-B-Gone kit is just what you need. With just a simple click of the button you can turn off any TV from 100's of feet away. Zap!

### Step 1 — Parts Check!



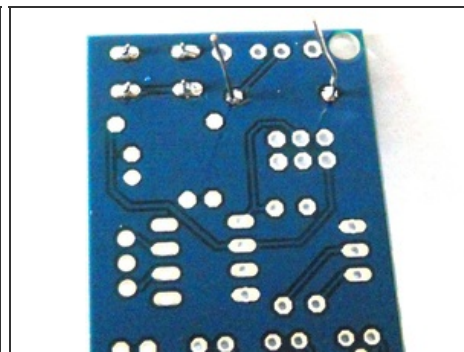
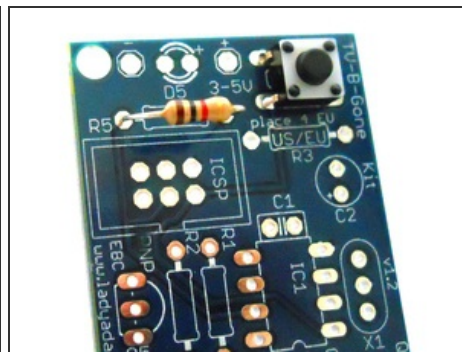
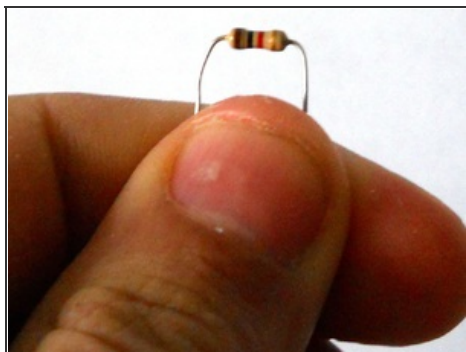
- On the first slide for this guide, you will find a list of the supplied parts to build this kit.
- Make sure you have all of the required parts. If you are missing any parts, check under your chair!

## Step 2 — Insert the Tactile Switch



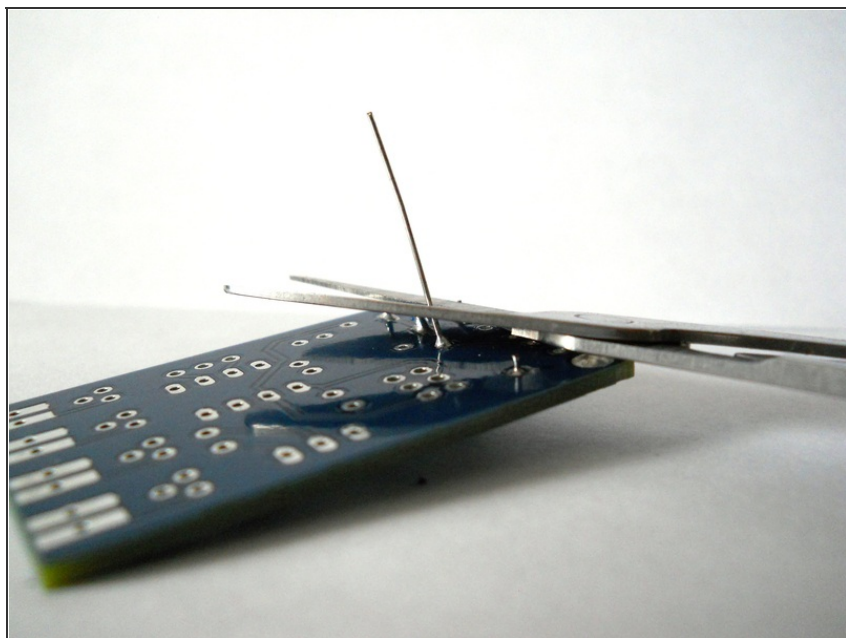
- The tactile switch should be soldered into the **S1** spot.
- It does not matter which way you put it in.
- Once it is flush with the board, turn it over and solder the connection.

## Step 3 — Brown-Black-Red Resistor



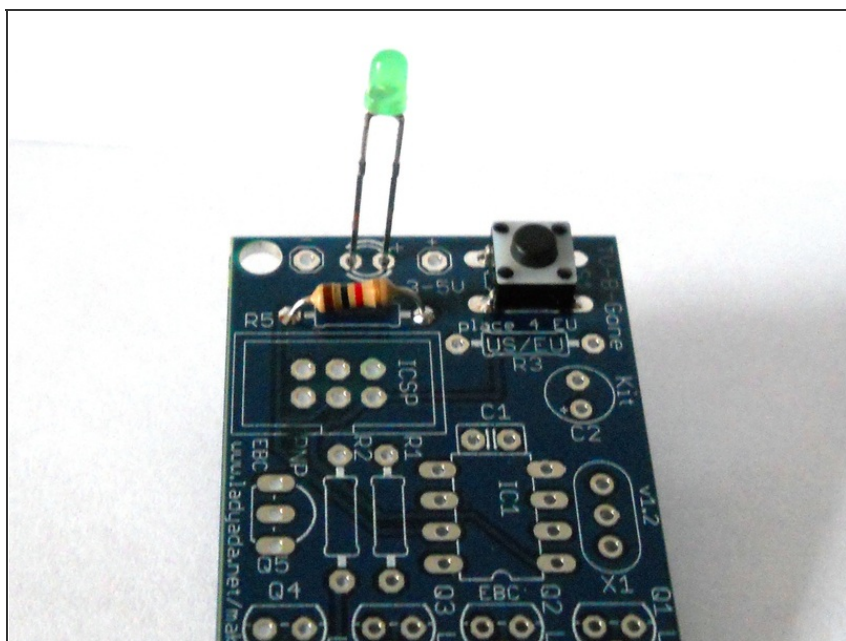
- Insert one of the Brown-Black-Red Resistors into the **R5** position.
- It does not matter which way you put the resistor in.
- Turn the board over and solder the leads.

## Step 4 — Tips!



- To make sure the leads stay in when you turn the board over, bend the leads outwards a little bit after inserting them into the PCB.
- To ensure that there are no shorts, be sure to clip the leads of the resistors after they are soldered. Do this for all the components after soldering.

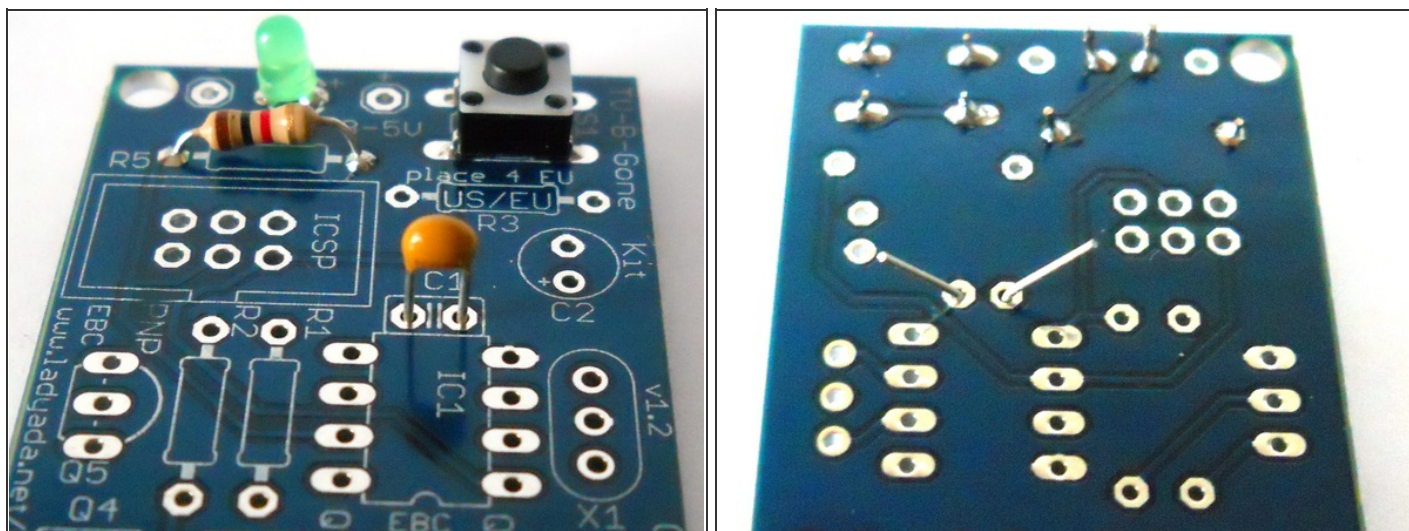
## Step 5 — Insert the Small Green LED at D5



- LEDs have one longer lead and one shorter lead. The longer lead is the positive lead, and the shorter one is the negative lead.
- Insert the longer lead into the hole marked with the (+) sign, and the shorter lead (-) goes into the other hole on the PCB.
- Turn the board over, and solder the LED in.

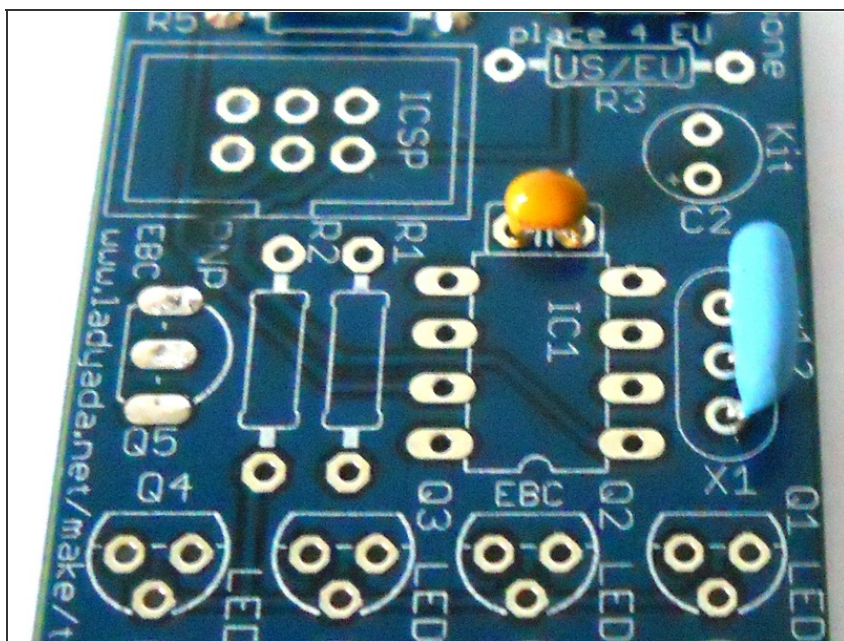


## Step 6 — Insert the Yellow Capacitor



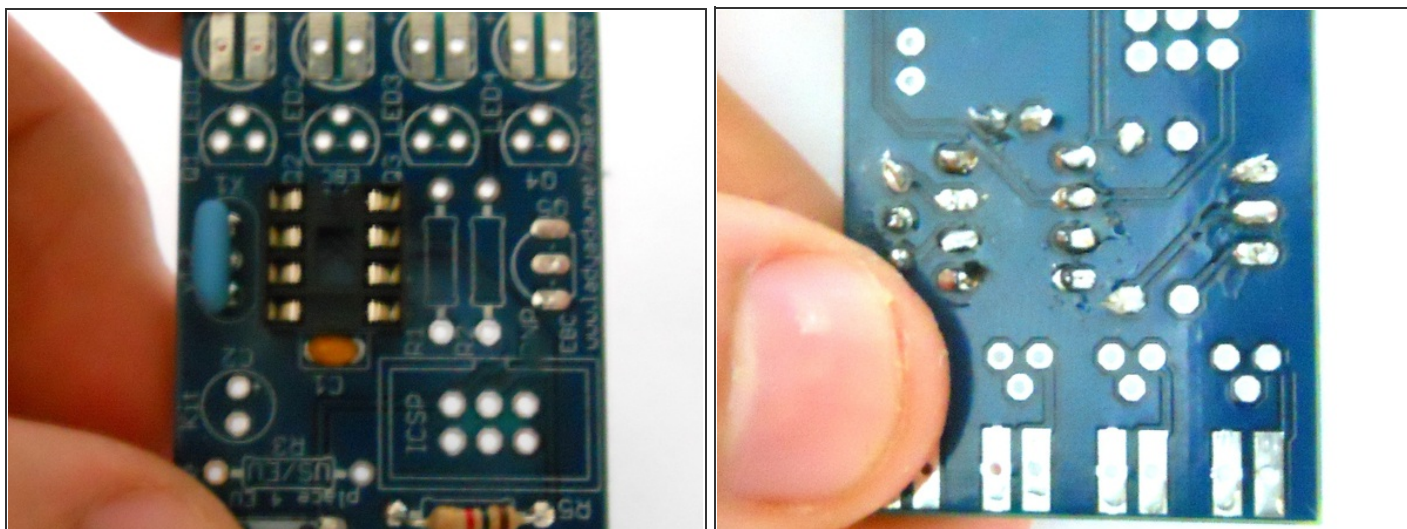
- The small yellow .1uF capacitor (marked 104) is to be inserted into **C1**.
- This capacitor is not polarized, so it doesn't matter which direction you put it in. Push it through, bend the leads, and solder.

## Step 7 — Insert the Blue Ceramic Oscillator



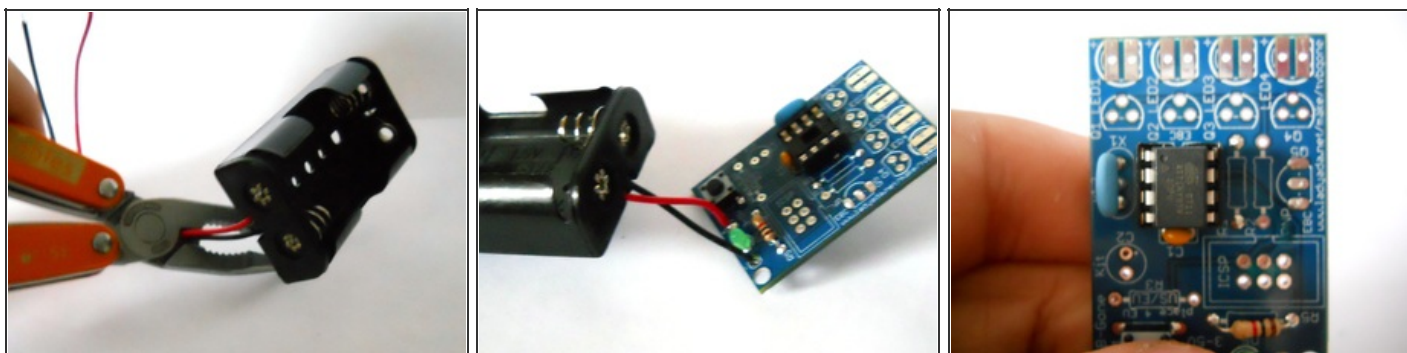
- The ceramic oscillator should be inserted into **X1** on the circuit board.
- The direction of insertion for this component doesn't matter.
- Turn it over, and solder it in.

## Step 8 — Insert the 8-PIN IC Socket



- The 8-Pin Socket must be inserted into the PCB by matching the silkscreened 'notch' printed on the circuit board to the 'notch' on the socket.
- Make sure the socket is flush with the board, turn it over and solder it in.

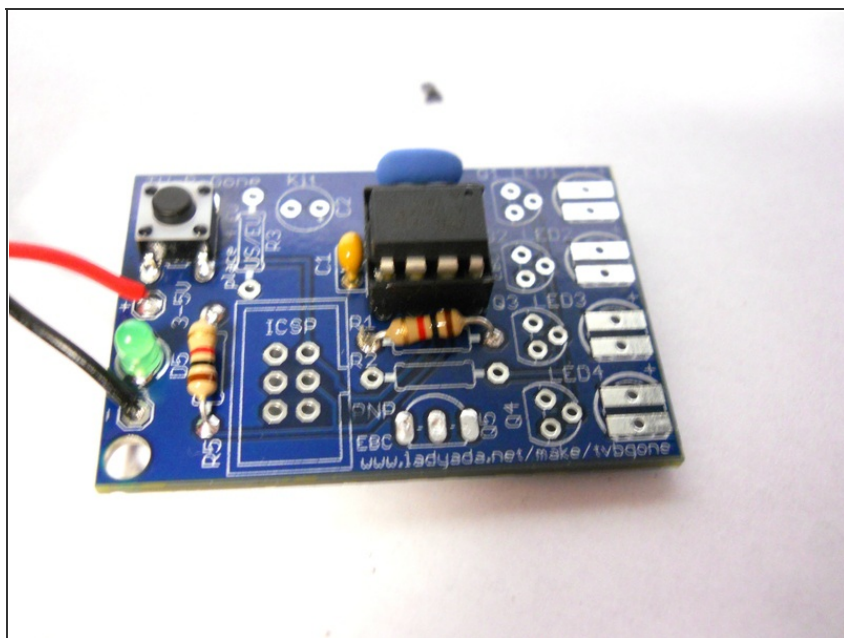
## Step 9 — Attaching the Battery Holder



- Begin by trimming the leads on the battery holder until there is only about a quarter of the wire remaining.
- Strip the ends of the wires so there is about about 1/4 " exposed.
- The red wire is inserted into the positive (+) hole, the black wire is inserted into the negative (-) hole in the PCB.
- Turn the board over and solder it in place.
- To test, put the chip in the 8-Pin socket, add two AA batteries, and your LED light should be blinking. The chip should be inserted with the dot on the IC facing the notched end of the 8-Pin socket. Before moving on, remove the batteries from the holder.

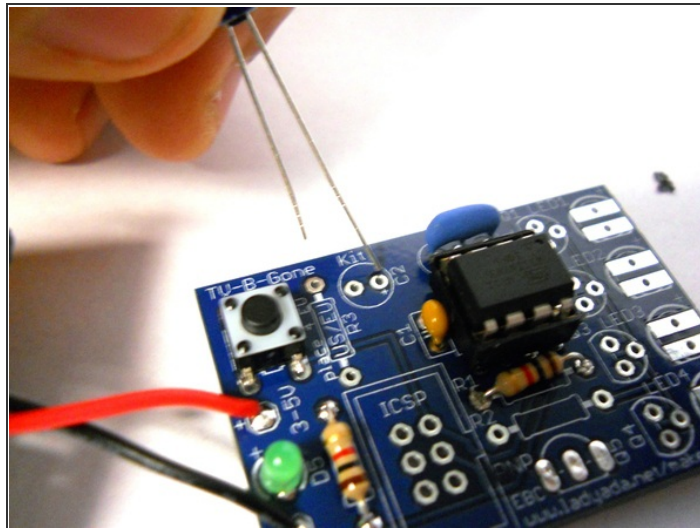
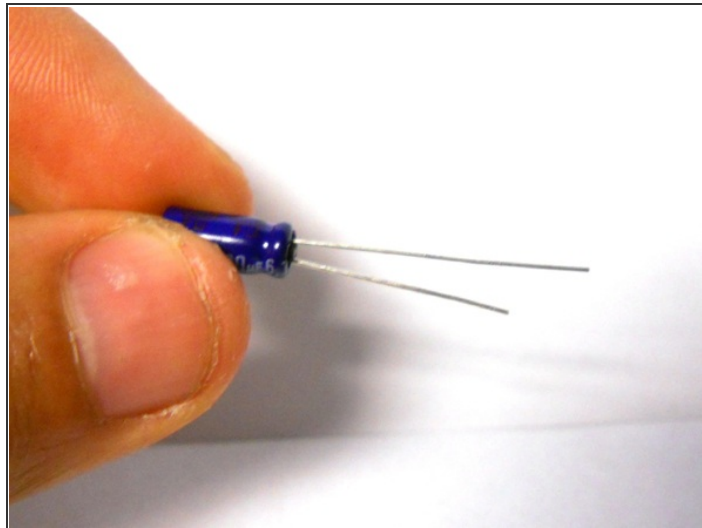


## Step 10 — Inserting the Next Resistor



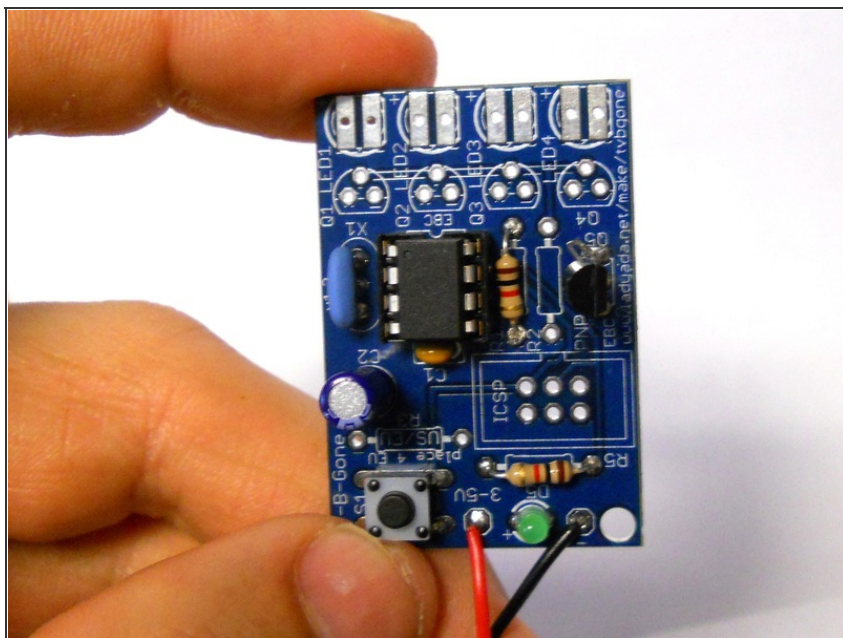
- In position **R1**, insert the other Brown-Black-Red Resistor. Like before, the orientation of the resistor on the PCB does not matter.
- Turn the board over and solder it in.

## Step 11 — Inserting the 220uF Capacitor



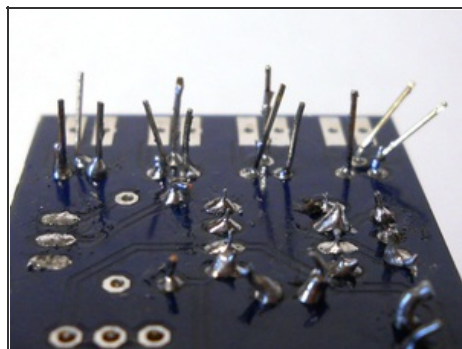
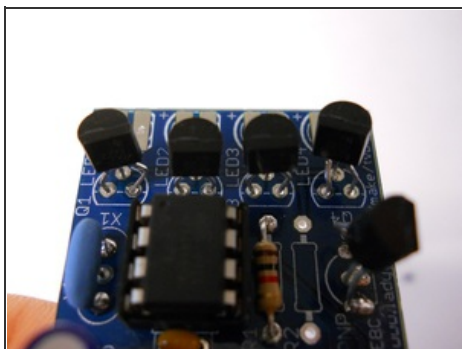
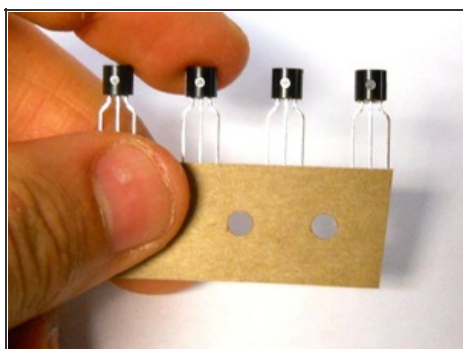
- The blue capacitor has a longer lead, which is positive (+), and the shorter lead is the negative (-).
- Insert this capacitor into C2, where the longer lead is inserted into the hole marked with a (+).
- Turn the board over, and solder the leads in.

## Step 12 — Insert the first transistor.



- The transistor marked **2907** should be inserted into **Q5**.
- The flat end should be facing outward on the PCB, matching the silkscreen. Push the transistor through the hole, and solder the leads in.

## Step 13 — Inserting the 4 Transistors



- Included in the kit are four NPN (2N2222) transistors. They are soldered into Q1, Q2, Q3, and Q4.
- Insert each transistor matching the silkscreen on the PCB.
- Turn the board over, and solder the joints. Be sure to snip the leads to avoid anything shorting out.

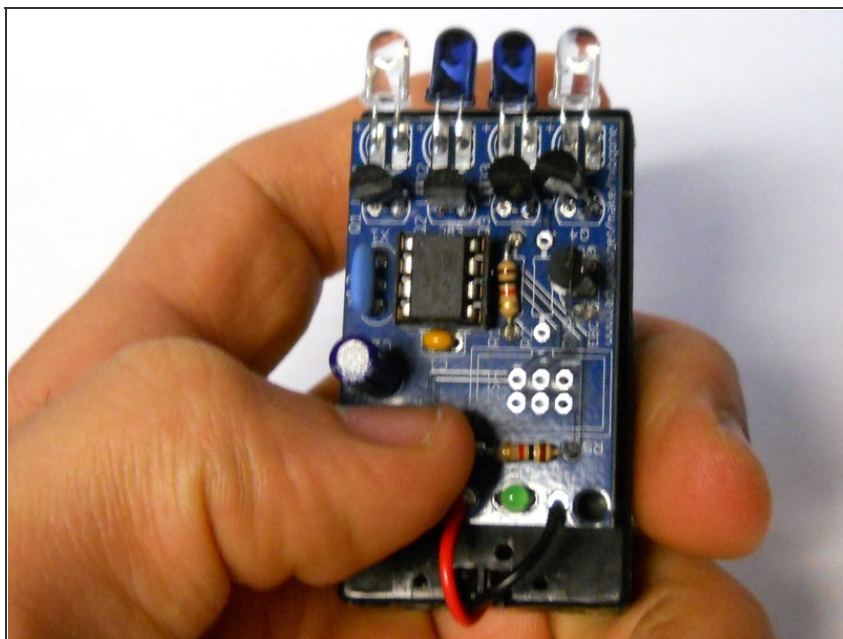


## Step 14 — Inserting the LEDs



- Each IR LED has a longer lead and a smaller lead. The longer lead is the positive (+)
- You will want the LEDs to face forward, so leave some room when you insert the LED into the PCB. (see pictures for LED orientation)
- The two 'clear' LEDs go on the outside of the PCB, and the two 'blue' LEDs go on the inside as pictured.
- After you solder the LEDs in, bend them forward.

## Step 15 — Finished!



- Now add two fresh AA batteries you're good to go! Keep in mind that the LED will blink continuously if your batteries are low.
- All done! Take this anywhere you need to zap a TV. Just point and press!
- After hitting the button, the TV-B-Gone will continue to transmit for around 2 minutes, sending all the codes stored in the chip.
- Enjoy!

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